

REMARKS

Claims 1-3 and 10 have been revised to correct for grammatical errors. These revisions are not related to the patentability of these, or other, claims.

Claim 8 was rejected under 35 U.S.C. §102(e) as being anticipated by Kinoshima, U.S. Patent No. 5,909,305. Applicants would like to point out that U.S. Patent No. 5,909,305 lists as the inventor Susumu Kinoshita. Therefore, this reference will be referred to as the "Kinoshita", not "Kinoshima" reference.

Claims 1 and 2 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kinoshita in view of Ono, U.S. Patent No. 5,861,980 ("Ono") and further in view of Itou et al., U.S. Patent No. 5,870,217 ("Itou"). Claims 1 and 2 were additionally rejected as being unpatentable over Ono in further view of Itou. Claims 3, 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ono in further view of Itou as applied to claim 1 and in further view of Nilsson et al., U.S. Patent No. 6,222,961 ("Nilsson"). Claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ono in further view of Itou as applied to claim 1 and in view of Nilsson as applied to claim 3 and 5 and in further view of Onaka et al., U.S. Patent No. 6,359,726 ("Onaka"). Claims 8, 9 and 11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ono in view of Nilsson. Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ono in view of Nilsson as applied to claim 8 and in further view of Itou. Claims 12 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ono in further view of Nilsson as applied to claims 8 and 11 and in further view of Doerr, U.S. Patent No.



6,141,467 ("Doerr"). Claim 14 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ono, Nilsson and Doerr as applied to the rejection of claim 12 and in further view of Onaka, U.S. Patent No. 6,359,726 ("Onaka").

Claims 1 and 8 are the independent claims pending in this application and it is to the rejections related to those claims that we will direct our attention.

Claim 8 is not anticipated by Kinoshita.

Claim 8, as amended, requires the generation, as a function of a first and second power signal, of a signal indicative of whether a particular transmission impairment, occurring along a transmission path of optical signals, has effected the levels of individual ones of a plurality of received optical signals.

In contrast, Kinoshita does not disclose or, suggest the generation of a signal indicative of whether a particular transmission impairment has occurred along a transmission path of optical signals, as in claim 8 of the present invention. Instead, Kinoshita is concerned with the generation of a so-called "monumental wavelength" of an optical amplifier. The determination of this wavelength is not related to impairments which may have occurred along a transmission path, but, is related to the output of an optical amplifier.

Accordingly, because Kinoshita does not disclose each and every element of claim 8, claim 8 is patentable over Kinoshita. Applicants respectfully request withdrawal of the pending rejection and allowance of claim 8.



Claims 1 and 2 are patentable over Kinoshita, in view of Ono and in further view of Itou.

As the Office Action admits, Kinoshita does not “clearly show the optical signals may have been affected by Raman scattering occurring along [a] transmission path; and [a] controller for offsetting the effect of such Raman scattering as a function of the sum of the two signals”.

To make up for these deficiencies, the Office Action relies on a combination of Ono and Itou. Applicants respectfully disagree and traverse this rejection for at least the following reasons.

With respect to the combination of Kinoshita with Ono, Applicants respectfully suggest that this is an improper combination. Kinoshita is directed at a method of monitoring a gain tilt of an amplifier by measuring a monomodal wavelength. Kinoshita explicitly states that the calculation of this wavelength is done without using a spectrum analyzer. In contrast, Ono discloses the use of an optical spectrum analyzer in order to detect a current number of channels in a wavelength division multiplexed (WDM) system.

As such, one of ordinary skill in the art would not be motivated to combine the disclosure in Kinoshita with the disclosure in Ono because to do so would render either one or both of the references unsatisfactory for their intended purposes.

In addition, the combination of Kinoshita with Ono would change the principal of operation of one or both of these references. Accordingly,



Applicants respectfully request withdrawal of this rejection and allowance of claims 1 and 2.

In addition to the above, claims 1 and 2 are also patentable over the combination of Kinoshita with Ono and Itou because none of these references, taken separately or in combination, discloses or suggests a controller for offsetting the effect of Raman scattering as a function of the sum of power levels, where a first power level indicates a total power across a group of received optical signals and a second power level indicates a total power across a group of optical signals after those signals have been subjected to a predetermined weighting function, as in claims 1 and 2 of the present invention.

None of the references is directed at correcting a plurality of optical signals whose powers have been affected by Raman scattering. The Office Action relies on Ono for disclosure of a Raman pump. While Ono does state that a Raman pump can be used as an optical amplifier, there is no disclosure or suggestion in Ono that the optical spectrum analyzer disclosed therein is capable of offsetting the effect of Raman scattering as a function of the sum of two power levels; one which indicates a total power across a group of received optical signals, and a second which indicates a total power across a group of optical signals, after those signals have been subjected to a predetermined weighting function, both signals originating from a plurality of optical signals that have undergone Raman scattering occurring along a transmission path, as in claims 1 and 2 of the present invention. In fact, neither Kinoshita, Ono, nor



Itou is directed at offsetting the effect of Raman scattering or offsetting the effect of a transmission impairment which occurs along a transmission path to a plurality of optical signals, as claims 1 and 2 of the present invention.

Claims 1 and 2 are patentable over the combination of Ono and Itou.

The Office Action separately rejects claims 1 and 2 based on Ono and Itou.

For the reasons just stated above, claims 1 and 2 are patentable over Ono and Itou.

In addition, the Office Action is correct in pointing out that Ono does not clearly show a signal for offsetting the sum of first and second signals. To make up for this deficiency, the Office Action relies on Itou, column 27, lines 21-25. For at least the reasons set forth below, Applicants believe this rejection is incorrect and respectfully traverse this rejection.

Itou is also directed at adjusting the output of an optical amplifier. It is not directed at offsetting the effect of Raman scattering, as is required by claims 1 and 2 of the present invention. To that end, the outputs produced by the amplifiers in column 27, lines 21-25, are not used to offset the effect of Raman scattering as a function of the power levels of first and second signals, as in claims 1 and 2 of the present invention.

Applicants respectfully suggest that the subject matter of claims 1 and 2 would not have been obvious to one of ordinary skill in the art at the time the present patent application was filed as based on the disclosures of Ono and Itou taken separately or in combination.

Accordingly, Applicants respectfully request withdrawal of the pending rejections and allowance of claims 1 and 2 and the claims which depend therefrom.

Claims 8, 9 and 11 are patentable over the combination of Ono and Nilsson.

As indicated in the Office Action, Ono does not disclose or suggest a sensor which includes an apparatus for filtering a plurality of optical signals to form a group of signals.

In addition, however, as indicated above neither Ono nor Nilsson discloses or suggests a sensor which includes an apparatus for generating, as a function of a first and second power signals, a signal indicative of whether a particular transmission impairment which occurred along a transmission path of the optical signals, has affected the levels of individual ones of the received plurality of optical signals, as in claim 8 of the present invention.

Accordingly, Applicants respectfully submit that claims 8, 9 and 11 would not have been obvious to one of ordinary skill in the art at the time the present patent application was filed based on the disclosures of Ono and/or Nilsson taken separately or in combination.

The remaining rejections.

As for the remaining rejections which add Nilsson, Onaka or Doerr in combination with one or more of the references cited above, Applicants respectfully submit that these claims are patentable over the combination of

references indicated in the Office Action for the reasons set forth with respect to claims 1, 2 or 8 above.

Accordingly, Applicants request withdrawal of the pending rejections and allowance of claims 1-14.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John E. Curtin at the telephone number of the undersigned below.

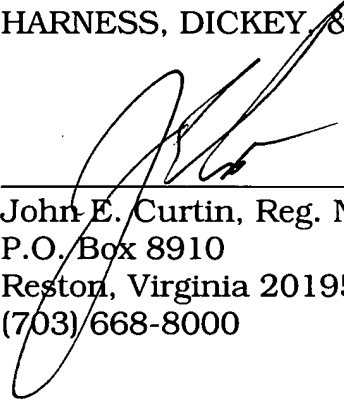
In the event this Response does not place the present application in condition for allowance, applicant requests the Examiner to contact the undersigned at (703) 668-8000 to schedule a personal interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY & PIERCE, P.L.C.

By



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Attachment for Specification Amendments

Page 2, Fifth Paragraph (Beginning on Line 15)

More specifically, a sensor processes a group of incoming channel signals to generate a first signal, P_0 , that is indicative of the total power across the group channel signals[[]], and a second signal, P_1 , that is indicative of the total power across the group of channels after the group of channel signals has been subjected to a predetermined weighting function. The system then offsets, as a function of the first and second signals, any Raman scattering that may be affecting the channels signals.